

App. No. 09/747,383
RCE, dated May 17, 2004
Reply to Final Office Action of November 17, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-15 (canceled)

16. (currently amended): The composition of claim ~~15~~ 24, wherein said solution contains at least one million International units of gamma-IFN/ml, as measured by (i) the ability of γ -IFN to stimulate CD64 antigen expression in cultured enriched human monocytes, or (ii) the biological activity of the γ -IFN in solution and droplet form is determined by the ability of γ -IFN to stimulate HLA-DR antigen expression in cultured human monocytes.

17. (currently amended): The composition of claim ~~15~~ 24, wherein said solution includes mannitol as a stabilizing agent.

18. (original): The composition of claim 17, wherein said mannitol is present in an amount between 5-15 mM.

19. (currently amended): The composition of claim ~~15~~ 24, wherein said solution includes polysorbate as a dispersing agent.

20. (original): The composition of claim 19, wherein the polysorbate is present in an amount between 50-200 mg/liter weight percent.

21. (currently amended): The composition of claim ~~15~~ 24, wherein the solution has a viscosity at room temperature of less than 2Cp.

22. (currently amended): A liquid-droplet aerosol composition for delivery to a patient's respiratory tract

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(a) formed from an aqueous γ -IFN solution having a known, selected γ -IFN biological activity, and comprising a dispersing agent and a stabilizing agent consisting of sugar, alcohol, amino acid, or a combination thereof, and wherein the composition does not include serum albumin, and

(b) wherein the aqueous droplets are characterized by

(a)' a narrow particle distribution such that at least 80% of the droplets have a size in a selected size range, wherein the selected size range is selected from the group consisting of (i) less than 1 micron, (ii) 1-3 microns, (iii) 3-5 microns, (iv) 5-10 microns, and (v) greater than 10 microns,

(b)' a γ -IFN biological activity substantially the same as that of the solution; and

(c)' a γ -IFN molecular size distribution substantially the same as that of the solution.

23. (previously presented): The composition of claim 22, wherein at least 95% of the droplets have a size in the selected size range.

24. (new): A liquid-droplet aerosol composition for delivery to a patient's respiratory tract

(a) formed by placing an aqueous γ -IFN solution having a known, selected γ -IFN biological activity, and comprising a stabilizing agent and a dispersing agent, wherein the stabilizing agent is a sugar, alcohol, amino acid, or a combination thereof, and wherein the composition does not include serum albumin, against a plate having defined-sized openings, and forcing the solution through said openings, under conditions effective to form aqueous droplets having

(a)' a narrow distribution of sizes that is less than 2 standard deviations from the volume mean diameter of the droplets, wherein the volume mean diameter is in a selected size range selected from the group consisting of (i) less than 1 micron, (ii) 1-3 microns, (iii) 3-5 microns, (iv) 5-10 microns, (v) greater than 10 microns, and (vi) two or more of the size ranges,

(b)' a γ -IFN biological activity substantially the same as that of the solution, and

(c)' a γ -IFN molecular size distribution substantially the same as that of the solution; and

App. No. 09/747,383
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(b) characterized by an aerosol of aqueous droplets having (a)' a narrow distribution of sizes that is less than 2 standard deviations from the volume mean diameter of the droplets, wherein the volume mean diameter is in a selected size range selected from the group and consisting of (i) less than 1 micron, (ii) 1-3 microns, (iii) 3-5 microns, (iv) 5-10 microns, (v) greater than 10 microns, (b)' a g-IFN biological activity substantially the same as that of the solution, and (c)' a g-IFN molecular size distribution substantially the same as that of the solution.